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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/420,368	10/18/1999	GERARD FRANCIS MCGLINCHEY	T0461/7003	2702
7590 05/03/2004				
STEVEN J HENRY C/O WOLF GREENFIELD & SACKS PC FEDERAL RESERVE PLAZA 600 ATLANTIC AVENUE BOSTON, MA 022102211		EXAMINER NGUYEN, HIEP		
		ART UNIT PAPER NUMBER 2816		
DATE MAILED: 05/03/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/420,368	MCGLINCHEY, GERARD FRANCIS	
	Examiner	Art Unit	
	Hiep Nguyen	2816	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 January 2004.
 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,6-11 and 14-21 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☐ Claim(s) _____ is/are allowed.
 6) ☒ Claim(s) 1-3,6-11,14-17 and 19-21 is/are rejected.
 7) ☒ Claim(s) 18 is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The amendment filed on 01-20-04 has been received and entered in the case. New ground of rejections necessitated by the amendment is set forth below.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the recitation "control means" in claims 1, 8, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. Figures 1-6 are objected to because letters are too small and blurred.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3 and 8-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Correction and/or clarification is required.

Regarding claims 1, 3 and 8, the recitation "control means for selecting between the first and second driving means" is indefinite because it is misdescriptive. Figure 5 of the present application does not show "control means" that selects first and second driving means. Figure 8 shows a switched current feedback amplifier that is not related to the "control means". The circuit of figure 8 has outputs (outn, Ioutn, outp and Ioutp) that are not used to select the first and second driving means shown in figures 5 or 6. The Applicant is requested to point out the "control means" in the drawings.

Regarding claim 8, the recitation "the terminating elements are coupled to the mid-point termination voltage and the lines" is indefinite because it is misdescriptive. Figure 5 of the

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present application shows that two terminating elements (53, 54) are connected to the output terminals of the first and second drivers. No mid- point termination voltage is seen as recited.

Claims 9 and 10 are indefinite because of the technical deficiencies if claim 8.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 7, 11, 16, 17, 19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Leighton et al. (US Pat. 6,121,800).

Regarding claims 1 and 3, figure 1 of Leighton shows a driver circuit for driving a line in a network comprising:

first driving means (Q5-Q8) for driving the line, said first driving means comprising a plurality of current sources arranged in a bridge configuration;

second driving means (Q1-Q4) for driving the line; and

control means (18, 20, 22, 24) for selecting between the first and second driving means (col.5, lines 12-32).

Regarding claim 7, the voltage source is (Vcc2).

Regarding claims 11, 16, 17, 19 and 20, figure 1 of Leighton shows a line driver circuit comprising:

a current source coupled to a first pair of terminals of a termination network, the current source comprising a plurality of current sources (Q5-Q8) arranged in a bridge configuration; and

a voltage source (Q1-Q4) coupled to a second pair of terminals of the termination network;

wherein the line driver circuit operates in a first configuration to establish a first mode of

operation, and in a second configuration to establish a second mode of operation (col. 5 lines 12-32). In the second mode the current source (Q5-Q8) are ON. The resistive network comprise resistors (R1) and (R2).

Claim 21 is rejected under 35 U.S.C. 102(b) as being anticipated by Burke (US Pat. 3,843,834).

Regarding claim 21, figure 1 and 2 of Burke show a method for providing multi-mode driver capability, the method comprising the steps of:

- (a) providing a line driver circuit including both a current source and a voltage source;
- (b) selecting a first or second mode of operation;
- (c) operating the line driver circuit in a first configuration when the first mode of operation is selected; and
- (d) operating the line driver circuit in a second configuration when the second mode of operation is selected (see col. 2, lines 48-66). Note that claim 21 is read on figure 1 of Leighton et al. (US Pat. 6,121,800).

Claims 1-3, 11 and 14-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Goff (US Pat. 5,379,209).

Regarding claims 1 -3, figures 3 and 4 of Goff shows a driver circuit for driving a line in a network comprising:

first driving means (M1-M4) for driving the line, said first driving means comprising a plurality of current sources arranged in a bridge configuration;

second driving means (M5-M8) for driving the line; and

control means not shown generating signals (A, B, C, D) for selecting between the first and second driving means (cols. 5-6). Figure 4 shows that when signals A and B are low and C or D is high, the voltage source that applies voltage (-V) and (+V) to terminals (X) and (Y) and the current source (M1-M4) are selected. The control means comprising logic signal for enabling or disabling the first and second driving means.

Regarding claims 11, 14, 15, 16, 17, figure 3 and 4 of Goff shows a current source (M1-M4) configured to be a bridge circuit and a voltage source (M5-M8). The line driver performs

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first and second modes of operation (current mode when M1-M4 are ON and voltage mode when M5-M8) are ON)

Allowable Subject Matter

Claim 18 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 8-10 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

Claim 6 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hiep Nguyen whose telephone number is (571) 272-1752. The examiner can normally be reached on Monday to Friday from 7:30am to 4:00pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on (571) 272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hiep Nguyen

04-27-04



TUANT.T.LAM
PRIMARY EXAMINER